IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-3. (Cancelled)

4. (Currently Amended) A spectroscope comprising:

an entrance aperture member for passing light;

a first optical system for collimating diverging light having passed through the entrance aperture member;

a rotative spectroscopic element for separating the collimated light into a plurality of light fluxes;

a second optical system having a plurality of lenses for condensing the light fluxes near a focal plane, at least one of the lenses having a positive focal length and at least one of the lens having a negative focal length;

a variable-width slit disposed near the focal plane; and

an optical detector for detecting the light fluxes having passed through the variable-width slit, the light fluxes having different wavelengths corresponding to variation of the slit-width of the variable-width slit and/or the rotation angle of the rotative spectroscopic element, wherein:

aberrations with respect to the wavelengths of off-axial light fluxes are compensated in the second optical system; and

a relationship of $\nu_+ - \nu_- > 25$ is effective under the condition that: ν_+ indicates an Abbe number for the lens having the positive focal length; and ν_- indicates an Abbe number for the lens having the negative focal length.

5. (Previously Presented) A spectroscope according to Claim 4, wherein the rotative spectroscopic element is a reflective plane diffraction grating that satisfies a relationship of

$$0 < \frac{2.44 \cos\alpha}{NmD} < 0.04$$

under the condition that α indicates an incident angle of the light flux incident into the reflective plane diffraction grating, N indicates grooves per a unit length, the grooves being

formed on the reflective plane diffraction grating, m indicates a diffraction order, and D indicates a diameter of the light flux collimated by the first optical system.

6. (Previously Presented) A spectroscope according to Claim 5, wherein the first optical system comprises a first lens group having a negative focal length and a second lens group having a positive focal length.

7. (Previously Presented) A spectroscope according to Claim 5 wherein

the optical detector detects the light fluxes having wavelengths selectively by rotating the reflective plane diffraction grating and changing the width of the slit of the variable-width slit.

8. (Currently Amended) A spectroscope ~~according to Claim 4,~~ comprising:

an entrance aperture member for passing light;

a first optical system for collimating diverging light having passed through the entrance aperture member;

a non-rotative prism for separating the collimated light into a plurality of light fluxes;

a second optical system having a plurality of lenses for condensing the light fluxes near a focal plane, at least one of the lenses having a positive focal length and at least one of the lens having a negative focal length;

a variable-width slit disposed near the focal plane; and

an optical detector for detecting the light fluxes having passed through the variable-width slit, the light fluxes having different wavelengths corresponding to variation of the slit-width of the variable-width slit, wherein:

aberrations with respect to the wavelengths of off-axial light fluxes are compensated in the second optical system; and

a relationship of $\nu_+ - \nu_- > 25$ is effective under the condition that: ν_+ indicates an Abbe number for the lens having the positive focal length; and ν_- indicates an Abbe number for the lens having the negative focal length,

wherein [[a]] the non-rotative prism ~~instead of the rotative spectroscopic element~~ detects the light fluxes having-different wavelengths selectively by changing the slit width of the variable-width slit.

9-12. (Cancelled)

13. (Currently Amended) A laser scanning microscope comprising:

a light source;

an objective lens for condensing light emitted from the light source on a sample;

a light condensing optical system for condensing the light reflected on the sample or emitted from the sample;

a pinhole disposed near a focal point in the light condensing optical system, the pinhole being optically conjugate with the sample;

a first optical system for collimating the light ,having passed through the pinhole and diverging from the pinhole with respect to an optical axis of the first optical system, into approximate parallel light;

a rotative spectroscopic element for separating the collimated light into a plurality of light fluxes;

a second optical system having a plurality of lenses for condensing the separated light fluxes near a focal plane, at least one of the lenses having a positive focal length and at least one of the lens having a negative focal length;

a variable-width slit disposed near the focal plane; and

an optical detector for detecting the condensed light fluxes having passed through the variable-width slit, the light fluxes having different wavelengths corresponding to variation of a slit-width of the variable-width slit and/or the rotation angle of the rotative spectroscopic element, wherein:

aberrations for a plurality of wavelengths of an off-axial light flux are compensated in the second optical system; and

a relationship ~~such as~~ of $\nu_+ - \nu_- > 25$ is effective under the condition that: ν_+ indicates an Abbe number for the lens having a positive focal length; and ν_- indicates an Abbe number for the lens having a negative focal length.

14. (Previously Presented) A laser scanning microscope according to Claim 13, wherein the rotative spectroscopic element is a reflective plane diffraction grating that satisfies a relationship of

$$0 < \frac{2.44 \cos\alpha}{NmD} < 0.04$$

under the condition that α indicates an incident angle of a light flux which is incident into the reflective plane diffraction grating, N indicates grooves per a unit length, the grooves being formed on the reflective plane diffraction grating, m indicates a diffraction order, and D indicates a diameter of the light flux collimated by the first optical system.

15. (Previously Presented) A laser scanning microscope according to Claim 14, wherein the first optical system comprises a first lens group having a negative focal length and a second lens group having a positive focal length.

16. (Previously Presented) A laser scanning microscope according to Claim 13, wherein

the optical detector detects the light fluxes having wavelengths selectively by rotating the reflective plane diffraction grating and changing the width of the slit of the variable-width slit.

17. (Currently Amended) A laser scanning microscope~~ according to Claim13~~, comprising:

a light source;

an objective lens for condensing light emitted from the light source on a sample;

a light condensing optical system for condensing the light reflected on the sample or emitted from the sample;

a pinhole disposed near a focal point in the light condensing optical system, the pinhole being optically conjugate with the sample;

a first optical system for collimating the light ,having passed through the pinhole and diverging from the pinhole with respect to an optical axis of the first optical system, into approximate parallel light;

a prism for separating the collimated light into a plurality of light fluxes;

a second optical system having a plurality of lenses for condensing the separated light fluxes near a focal plane, at least one of the lenses having a positive focal length and at least one of the lens having a negative focal length;

a variable-width slit disposed near the focal plane; and

an optical detector for detecting the condensed light fluxes having passed through the variable-width slit, the light fluxes having different wavelengths corresponding to variation of a slit-width of the variable-width slit, wherein:

aberrations for a plurality of wavelengths of an off-axial light flux are compensated in the second optical system; and

a relationship of $\nu_+ - \nu_- > 25$ is effective under the condition that: ν_+ indicates an Abbe number for the lens having a positive focal length; and ν_- indicates an Abbe number for the lens having a negative focal length, ~~having a prism instead of the rotative spectroscopic element,~~ wherein the optical detector detects the light fluxes having wavelengths selectively by changing the slit width of the variable-width slit.

18. (Currently Amended) A laser scanning microscope ~~according to Claim 13~~ comprising:

a light source;

an objective lens for condensing light emitted from the light source on a sample;

a light condensing optical system for condensing the light reflected on the sample or emitted from the sample;

a single mode fiber disposed near a focal point in the light condensing optical system, the single mode fiber being optically conjugate with the sample;

a first optical system for collimating the light ,having passed through the single mode fiber and diverging from the single mode fiber with respect to an optical axis of the first optical system, into approximate parallel light;

a rotative spectroscopic element for separating the collimated light into a plurality of light fluxes;

a second optical system having a plurality of lenses for condensing the separated light fluxes near a focal plane, at least one of the lenses having a positive focal length and at least one of the lens having a negative focal length;

a variable-width slit disposed near the focal plane; and

an optical detector for detecting the condensed light fluxes having passed through the variable-width slit, the light fluxes having different wavelengths corresponding to variation of a slit-width of the variable-width slit and/or the rotation angle of the rotative spectroscopic element, wherein:

aberrations for a plurality of wavelengths of an off-axial light flux are compensated in the second optical system; and

a relationship of $v_+ - v_- > 25$ is effective under the condition that: v_+ indicates an Abbe number for the lens having a positive focal length; and v_- indicates an Abbe number for the lens having a negative focal length ~~having a~~ the single mode fiber having a light-incident-end ~~instead of the pinhole~~.

19. (Currently Amended) A confocal optical system comprising:

a laser scanning microscope including:

a light source;

an objective lens for condensing light emitted from the light source on a sample;

a light condensing optical system for condensing the light reflected on the sample or emitted from the sample;

a pinhole disposed at a focal point in the light condensing optical system, the pinhole being optically conjugate with the sample;

a first optical system for collimating the light ,having passed through the pinhole and diverging from the pinhole with respect to an optical axis of the first optical system, into approximate parallel light;

a rotative spectroscopic element for separating the collimated light into a plurality of light fluxes;

a second optical system having a plurality of lenses for condensing the separated light fluxes near a focal plane, at least one of the lenses having a positive focal length and at least one of the lens having a negative focal length;

a variable-width slit disposed near the focal plane; and

an optical detector for detecting the condensed light fluxes having passed through the variable-width slit, the light fluxes having different wavelengths corresponding to variation of a slit-width of the variable-width slit or the rotation angle of the rotative spectroscopic element, wherein:

aberrations for a plurality of wavelengths of an off-axial light flux are compensated in the second optical system; and

a relationship ~~such as~~ of $v_+ - v_- > 25$ is effective under the condition that: v_+ indicates an Abbe number for the lens having a positive focal length; and v_- indicates an Abbe number for the lens having a negative focal length.

20. (Previously Presented) A laser scanning microscope according to Claim 13, wherein a relationship of $\Delta\lambda < 20$ nm is effective under the condition that $\Delta\lambda$ indicates a wavelength resolution for separating a light having a wavelength λ from a light having a wavelength $(\lambda+\Delta\lambda)$.

21. (Previously Presented) A laser scanning microscope according to Claim 13, wherein a relationship of $\Delta\lambda < 5$ nm is effective under condition that $\Delta\lambda$ indicates a wavelength resolution for separating a light having a wavelength λ from a light having a wavelength $(\lambda+\Delta\lambda)$.